

## CLAIMS

What is claimed is:

5           1.     A method for integrating a payload with a launch vehicle in preparation for flight, the method comprising:

              standardizing payload integration points of the launch vehicle; and

              configuring the payload to interface with the standardized integration points, said configuring performed apart from the launch vehicle.

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              2.     The method of claim 1, wherein said configuring comprises configuring an interface element to interface with the payload and the launch vehicle integration points.

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              3.     The method of claim 2, wherein configuring an interface element comprises configuring a payload carrier to interface with at least one of an avionics system, a software system, a fluid system and a mechanical system of the launch vehicle.

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              4.     The method of claim 1, wherein standardizing comprises configuring one or more systems of the launch vehicle to provide one or more standard services to one or more payloads.

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              5.     The method of claim 1, wherein configuring comprises: configuring the payload to interface with a payload carrier; and configuring the payload carrier to interface with the launch vehicle integration points.

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              6.     The method of claim 1, wherein configuring the payload comprises configuring at least one of a deployable payload and a non-deployable payload.

7. A method for integrating one or more payloads with a launch vehicle without reconfiguring the launch vehicle, the method comprising configuring an interface element to interface with the one or more payloads and with one or more integration points of the launch vehicle to allow the one or more  
5 payloads to interface with one or more systems of the launch vehicle.

8. The method of claim 7, further comprising configuring the one or more payloads to interface with the interface element.

10 9. The method of claim 7, further comprising emulating the one or more integration points of the launch vehicle to test the one or more payloads, the testing performed using a test and verification system.

10. The method of claim 7, wherein the one or more systems of the  
15 launch vehicle include an avionics system.

11. The method of claim 10, wherein the interface element includes a payload carrier, and configuring an interface element comprises configuring an avionics system of the carrier to interface with the launch vehicle avionics  
20 system.

12. The method of claim 7, further comprising providing at least one of power, monitoring/commanding, attitude/pointing, contamination control, fluid services and active cooling to the one or more payloads via the one or more integration points of the launch vehicle.  
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13. The method of claim 7, wherein at least one of the one or more payloads is deployable from the launch vehicle.

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14. A method for integrating a payload with a launch vehicle in preparation for flight, the method comprising:

standardizing one or more integration points of the launch vehicle;

5 configuring an interface element to interface with the one or more standardized integration points to allow the payload to interface with one or more systems of the launch vehicle; and

configuring the payload to interface with the interface element.

15. The method of claim 14, further comprising integrating the interface  
10 element with the launch vehicle via the one or more standardized integration points.

16. The method of claim 14, wherein the configuring is performed apart from the launch vehicle.

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17. The method of claim 14, wherein configuring an interface element comprises configuring at least one of a payload carrier and a front-end software module.

20 18. The method of claim 14, wherein standardizing one or more integration points of the launch vehicle comprises standardizing transmission of at least one of data, fluid and power between the payload and the vehicle.

25 19. The method of claim 14, further comprising reallocating a standardized allocation of a service from the launch vehicle among a plurality of payloads.

20. The method of claim 19, wherein the reallocating is performed based on requirements of the plurality of payloads.

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